

Appl. No. 09/720,149
Supplemental Final Amendment
Reply to final Office action of 21 October 2004

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BEST AVAILABLE COPY**Amendments to the Claims:**

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-2 (Canceled)

3. (Previously presented) A device for use in a data bus system, wherein the bus system comprises a host station, a bus cable and the device coupled to the host station via the bus cable, the bus cable comprising a data transfer conductor and power supply conductors for enabling the device to obtain operating power from the bus system via the bus cable, the device comprising

a connector for coupling the device to the bus cable, and

a control circuit coupled to the connector,

wherein

the control circuit is arranged

to detect whether a power supply is connected to the power supply conductors and

to start waiting in a slave mode for commands received via the data transfer conductor or

to start operating in a stand-alone mode,

dependent on whether or not connection of the power supply has been detected respectively, and,

wherein the bus system further comprises a pull circuit for pulling a potential of the data transfer conductor away from a potential of a first one of the power supply conductors, the bus system being arranged to detect whether or not the potential of the data transfer conductor is pulled back to the potential of the first one of the power supply conductors via the bus cable so as to determine whether the device is connected to the bus cable, the device comprising

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a first resistive element and a switching element, connected in series between the data transfer conductor and
a pull back potential source,
the device comprising
a node coupled to a control electrode of the switching element,
a second and third resistive element coupled between the node and the first one and
a second one of the power supply conductors respectively,
so that the switching element is non-conductive when a potential of the node is affected only by the power supplied via the power supply conductors via the second and third resistive element,
the control circuit having an I/O connection coupled to the node,
the control circuit switching the I/O connection as an input to detect whether power is supplied via the power supply conductors and
the control switching the I/O connection as an output to make the switching element conductive to enable pull back.

4. (Original) A device according to Claim 3, wherein
the pull back potential source is the first one of the power supply conductors.

5-6 (Canceled)

7. (~~Currently amended~~Original) A device according to ~~Claim 6~~, wherein for use in a data bus system, wherein the bus system comprises a host station, a bus cable and the device coupled to the host station via the bus cable, the bus cable comprising a data transfer conductor and power supply conductors for enabling the device to obtain operating power from the bus system via the bus cable, and the bus system comprises a pull circuit for pulling a potential of the data transfer conductor away from a potential of a first one of the power supply conductors, the bus system being arranged to detect whether or not the potential of the data transfer conductor is pulled back to the potential of the first one of the power supply conductors via the bus

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cable so as to determine whether the device is connected to the bus cable, the device comprising:

a connector for coupling the device to the bus cable,
a control circuit coupled to the connector, and
a pull back circuit for pulling back the potential of the data transfer conductor to the potential of the first one of the power supply conductors;

wherein

the control circuit is arranged:

to detect whether a power supply is connected to the power supply conductors;

to start waiting in a slave mode for commands received via the data transfer conductor or

to start operating in a stand-alone mode,

dependent on whether or not connection of the power supply has been detected respectively;

to detect repeatedly whether power is supplied via the power supply conductors when the device operates in the slave mode or the stand-alone mode;
and

to switch from the slave mode to the stand-alone mode and/or vice versa by enabling and/or disabling the pull back circuit when absence or presence of power supply is detected respectively, and

the pull back circuit comprises

a first resistive element and

a switching element, connected in series between the data transfer conductor and a pull back potential source,

a delay element for holding a voltage across the switching element for a limited time interval after the switching element is signaled to switch from conductive to non-conductive,

the device comprising

a node coupled to a control electrode of the switching element,

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a second and third resistive element coupled between the node and the first one and a second one of the power supply conductors respectively;

so that

the switching element is non-conductive when power is supplied via the power supply conductors and

a potential of the node is affected only via the second and third resistive element,

the control circuit having an I/O connection coupled to the node,

the control circuit switching the I/O connection as an input to detect whether power is supplied via the power supply conductors and

the control switching the I/O connection as an output to make the switching element conductive when the device waits in the slave mode.

8-12 (Canceled)

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